

MICRO MAGNETIC LATCHING SWITCHES AND METHODS OF
MAKING SAME

ABSTRACT OF THE DISCLOSURE

A latching micro magnetic switch includes a magnet located proximate to a supporting structure. The magnet produces a first magnetic field with field lines symmetrically spaced about a central axis or non-uniform field lines. The switch also includes a cantilever supported by the supporting structure. The cantilever has a magnetic material and a longitudinal axis. The magnetic material makes the cantilever sensitive to the first magnetic field, such that the cantilever is configured to move between first and second states. The switch further includes a conductor located proximate to the supporting structure and the cantilever. The conductor is configured to conduct a current. The current produces a second magnetic field, which causes the cantilever to switch between the first and second states.

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